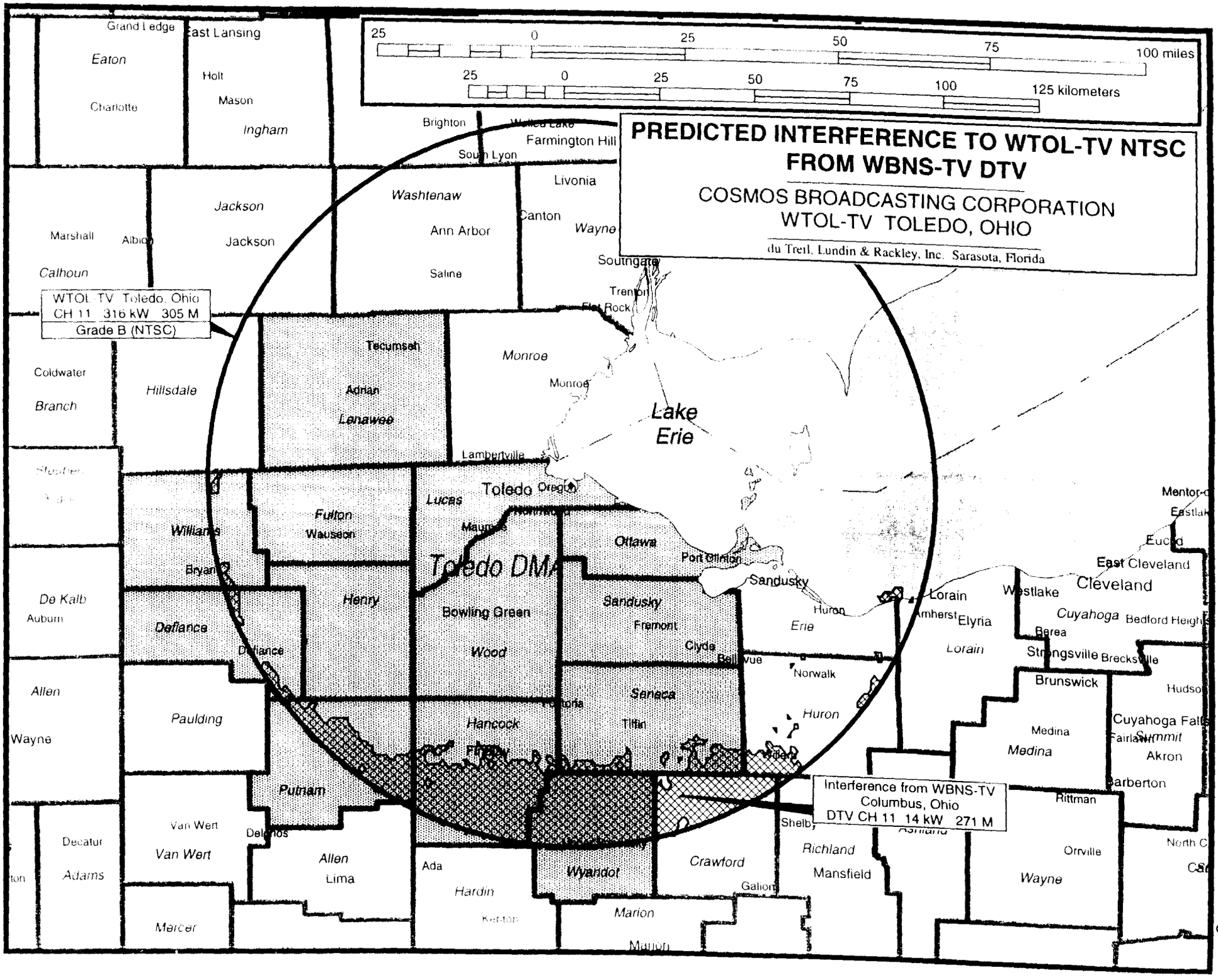
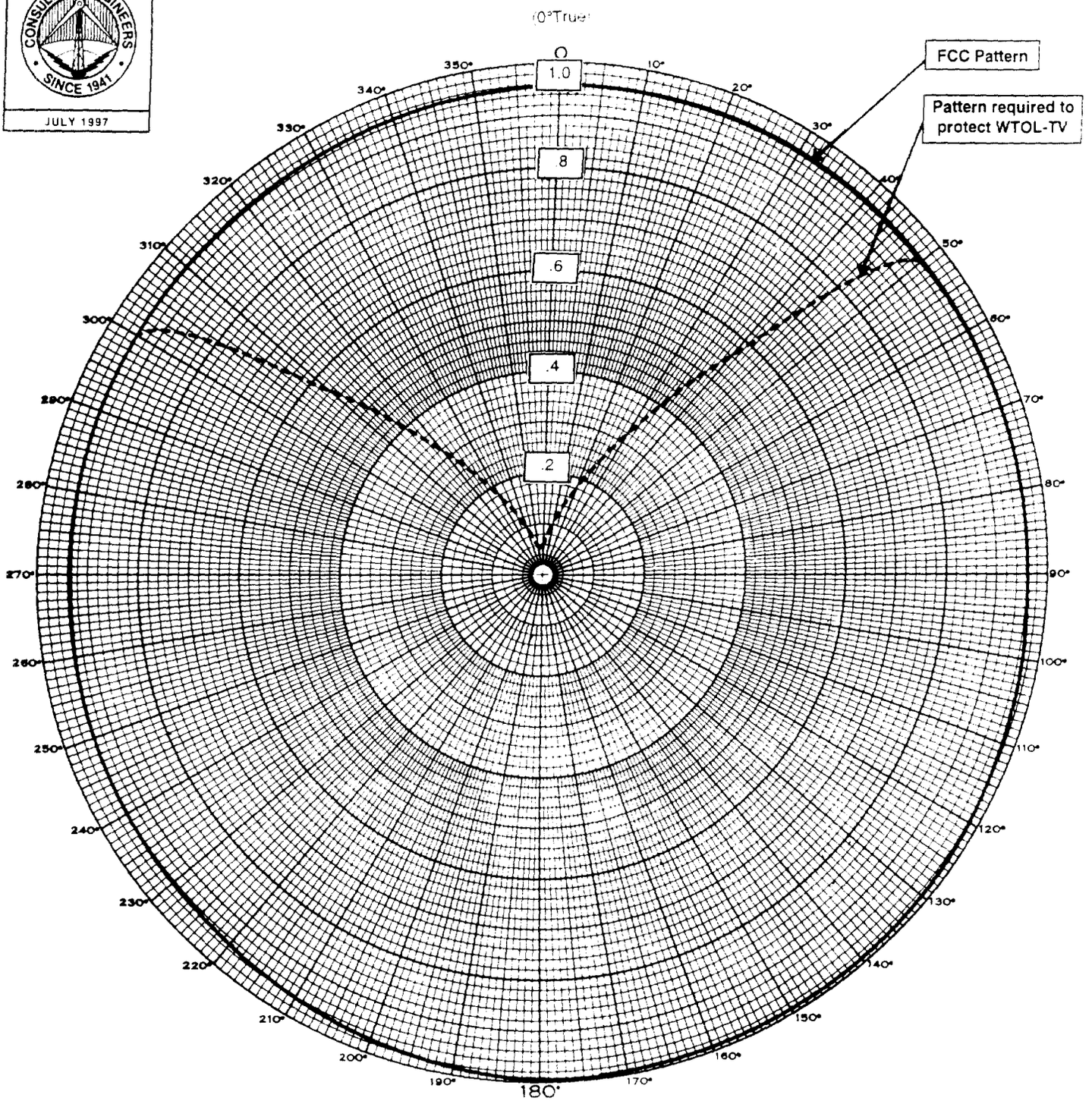

PREDICTED INTERFERENCE TO WTOL-TV NTSC
FROM WBNS-TV DTV
COSMOS BROADCASTING CORPORATION
WTOL-TV TOLEDO, OHIO
du Treil, Lundin & Rackley, Inc. Sarasota, Florida
25 0 25 50 75 100 miles
25 0 25 50 75 100 125 kilometers
WTOL TV Toledo, Ohio
CH 11 316 kW 305 M
Grade B (NTSC)
Interference from WBNS-TV
Columbus, Ohio
DTV CH 11 14 kW 271 M
Lake Erie
Toledo DMA
Grand Ledge
East Lansing
Eaton
Holt
Mason
Charlotte
Ingham
Brighton
Farmington Hill
South Lyon
Livonia
Canton
Wayne
Washtenaw
Ann Arbor
Saline
Jackson
Marshall
Albion
Calhoun
Southgate
Trenton
Flat Rock
Monroe
Coldwater
Branch
Hillsdale
Tecumseh
Adrian
Lenawee
Lambertville
Toledo
Oregon
Lucas
Fulton
Wauseon
Williams
Bryan
Henry
Bowling Green
Wood
Ottawa
Port Clinton
Sandusky
Fremont
Clyde
Bellevue
Norwalk
Seneca
Tiffin
Huron
Erie
Lorain
Elyria
Amherst
Mentor
Eastlake
Euclid
East Cleveland
Cleveland
Westlake
Cuyahoga
Bedford Heights
Berea
Strongsville
Brecksville
Brunswick
Medina
Hudson
Cuyahoga Falls
Summit
Akron
Barberton
Rittman
Orrville
Wayne
De Kalb
Auburn
Defiance
Allen
Paulding
Putnam
Van Wert
Decatur
Adams
Mercer
Allen
Lima
Ada
Hardin
Wyandot
Crawford
Galion
Marion
Richland
Mansfield
Shelby
Ashland
North C

Figure

Figure 2



WBNS-TV DTV DIRECTIONAL PATTERNS

(Relative Field)

COSMOS BROADCASTING CORPORATION

WTOL-TV TOLEDO, OHIO

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

ATTACHMENT B

WFIE(TV)—Evansville, Indiana

1. Technical Exhibit

du Treil, Lundin & Rackley, Inc.
A Subsidiary of A.D. Ring, P.A.

DTV INTERFERENCE ANALYSIS
WFIE-TV EVANSVILLE, INDIANA

WFIE-TV on NTSC Channel 14 at Evansville, Indiana is providing supplemental information with regard to interference from the co-channel DTV allotment at WTIU, Bloomington, Indiana. Pursuant to the Commission's Public Notice, WFIE-TV is providing further analysis of the predicted received interference considering OET Bulletin 69, "Longley-Rice Methodology for Evaluating TV Coverage and Interference." WFIE-TV is presently operating on NTSC Channel 14 at Evansville, Indiana with a maximum effective radiated power of 2,190 kilowatts with an antenna height above average terrain of 311 meters.

The separation distance between WFIE-TV and WTIU is 165.5 kilometers, where the required separation distance between an analog station and co-channel DTV station in Zone I is 217.3 kilometers according to Section 73.623(d) of the Commission's Rules. As stated in an earlier Technical Statement (dated June 11, 1997), interference will occur by the co-channel DTV operation of the planned Channel 14 DTV Bloomington facility to WFIE-TV. Based on calculations performed using the Longley-Rice propagation methodology contained in OET Bulletin 69, the predicted interference area to WFIE-TV occurs over approximately 260 square kilometers, which contains 2,750 persons.

WFIE-TV again requests that WTIU be assigned a DTV channel which does not interfere with the coverage of existing NTSC station WFIE-TV.

Charles A. Cooper

du Treil, Lundin & Rackley, Inc.
A Subsidiary of A.D. Ring, P.A.

DTV CHANNEL SUBSTITUTION
WFIE-TV EVANSVILLE, INDIANA

WFIE-TV on NTSC Channel 14 at Evansville, Indiana is requesting the substitution of the FCC assigned DTV channel. WFIE-TV is requesting DTV Channel 46 in lieu of the assigned DTV Channel 58. Pursuant to the Commission's Public Notice, WFIE-TV is providing an analysis of the proposed substitution Channel considering OET Bulletin 69, "Longley-Rice Methodology for Evaluating TV Coverage and Interference."

Based on the DTV separation distances contained in Section 73.623(d) of the Rules, WFIE-TV can substitute DTV Channel 46 for Channel 58 and meet all the required separation distances to all licensed and authorized facilities. The only distance short-spacings occurs with three vacant commercial NTSC allotments: Channel 46 at Paris, Illinois; Channel 48 at Owensboro, Kentucky; and Channel 61 at Owensboro. As discussed below, these vacant allotments should not prevent WFIE-TV from a DTV facility on Channel 46.

Additionally, the planned WFIE-TV Channel 58 DTV allotment has a severe short-spacing with WFTE(TV) on Channel 58 at Salem, Indiana. The minimum separation distance as required by the Commission is 217.3 kilometers, the actual separation distance is 155.2 kilometers. This is a short-spacing of 62.1 kilometers. By reallocating the WFIE-TV DTV Channel to 46, the interference predicted to WFTE(TV) NTSC and WFIE-TV DTV facilities would be eliminated.

Channel 46 Paris, Illinois NTSC Allotment

Paris, Illinois presently has a vacant commercial NTSC Channel 46 allotment. According to the Commission's television engineering database, no applications for construction permit are pending for this allotment. It therefore appears that the Commission will delete this vacant allotment.

Channel 48 Owensboro, Kentucky NTSC Allotment

At Owensboro, Kentucky, a vacant commercial allotment exists for NTSC Channel 48. Also pending are two applications for construction permit (BPCT-960722KL and BPCT-960920IV) for this allotment. It is noted that the minimum distance separations are satisfied toward these two pending applications. The minimum distance separations are less than 24.1 kilometers or greater than 80.5 kilometers. The actual separation distance is 20.5 kilometers from the proposed WFIE-TV Channel 46 DTV allotment reference site. Therefore, the WFIE 46 DTV allotment satisfies the minimum distance criterion toward the Owensboro, Kentucky NTSC Channel 48 pending applications.

The Channel 48, Owensboro, NTSC allotment also has a severe short-spacing to a co-channel DTV allotment at Bowling Green, Kentucky. The Commission's required minimum separation distance is 244.6 kilometers, the actual separation distance is only 122.0 kilometers. This is a short-spacing of 122.6 kilometers. A large amount of interference would occur to both the Owensboro NTSC and Bowling Green DTV facilities with a short-spacing of this magnitude.

Channel 61 Owensboro, Kentucky NTSC Allotment

Another vacant commercial allotment exists on Channel 61 at Owensboro. According to the Commission's television engineering database, no applications for construction permit are pending for this allotment. This channel is also located outside of the "core-spectrum." It therefore appears that the Commission will delete this vacant allotment.

Charles A. Cooper

August 20, 1997

du Treil, Lundin & Rackley, Inc.
240 North Washington Blvd., Suite 700
Sarasota, Florida 34236
941.366.2611

ATTACHMENT C

WIS(TV)—Columbia, South Carolina

1. Technical Exhibit
2. Manager's Statement

DTV CHANNEL SUBSTITUTION
WIS(TV) COLUMBIA, SOUTH CAROLINA

WIS(TV) on NTSC Channel 10 at Columbia, South Carolina is requesting the substitution of the FCC assigned DTV channel. WIS(TV) is requesting DTV Channel 11 in lieu of the assigned DTV Channel 41. Pursuant to the Commissions Public Notice, WIS(TV) is providing an analysis of the proposed substitution Channel considering OET Bulletin 69, "Longley-Rice Methodology for Evaluating TV Coverage and Interference."

Based on the DTV separation distances contained in Section 73.623(d) of the Rules, WIS(TV) can substitute DTV Channel 11 for Channel 41 and meet all the required separation distances except to three stations: (1) WTOC-TV on Channel at Savannah, Georgia, (2) WTVD(TV) on Channel 11 at Durham, North Carolina and (3) WRDW-TV on Channel 12 at Augusta, Georgia. However, as demonstrated below, minimal new interference is predicted to the above stations from the herein proposed WIS(TV) DTV facility.

Proposed WIS(TV) DTV Facilities

The proposed WIS(TV) DTV facility on Channel 11 proposes full-replication of the existing NTSC Channel 10 facility. The proposed Zone II non-directional DTV average effective radiated power to achieve full-replication is 17

kilowatts at the same location and radiation center of the WIS(TV) NTSC facility.[1]

Principal Community Coverage

As the proposed DTV facility is co-located with the existing WIS(TV) NTSC facility and full-replication of coverage is requested, the principal community coverage requirement of Section 73.625(a) is clearly achieved.

WTOC-TV Interference Considerations

According to the Commission's minimum separation distance table in Section 73.623(d), WTOC-TV on Channel 11 at Savannah, Georgia is short-spaced to the proposed DTV allotment on Channel 11. The required minimum separation distance from each station is 273.6 kilometers. The actual separation distance is 236.2 kilometers. Therefore, the short-spacing is 37.4 kilometers from WTOC-TV to the proposed WIS(TV) Channel 11 DTV facility. An interference analysis has been completed to WTOC-TV.

Using the procedure outline in OET Bulletin 69, the new interference to WTOC-TV is determined. According to our calculations, the approximate amount of new, or unique, interference to WTOC-TV occurs over 1,300 square kilometers (km^2) which contains 16,864 people. Figure 1 shows the service contour of the proposed WIS(TV) DTV

[1] The WIS(TV) NTSC facility on Channel 10 is located at 34° 07″ 27″ North Latitude, 80° 45′ 25″ West Longitude. The antenna radiation center is 553 meters above mean sea level and the height above average terrain is 512 meters.

facility and the Grade B contour of WTOC-TV. Also shown is the existing interference area (dots) which mask much of the DTV interference areas (cross-hatching). A county breakdown of the population and households is shown on Figure 2. The population values are based on the 1990 U.S. Census of Housing and Population.

According to Appendix B, *DTV Table of Allotments*, contained in the Commission's Sixth Report and Order, *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, the existing WTOC-TV NTSC interference-free service area is 34,178 km^2 containing a population of 671,000 persons. The approximate new interference area of 16,864 people represents 2.5 percent of the existing WTOC-TV population.

Additionally, as shown on Figure 1, the predicted new interference area from the herein proposed DTV facility is completely encompassed by the Grade B coverage contours of other stations with the same network affiliation as WTOC-TV.

WTVD(TV) Interference Considerations

WTVD(TV) on Channel 11 at Durham, North Carolina is short-spaced to the proposed WIS(TV) DTV allotment. The required minimum separation distance from each station is 273.6 kilometers. The actual separation distance is 265.8 kilometers. Therefore, the short-spacing is 7.8 kilometers from WTVD(TV) to the proposed WIS(TV) Channel 11 DTV facility.

According to our calculations, the approximate amount of new, interference to WTVD(TV) occurs to 55,210 persons over 1,675 km^2. Figure 5 shows the service contour of the proposed WIS(TV) DTV facility and the Grade B contour of WTVD(TV). A county breakdown of the population and households is shown on Figure 6.

The existing WTVD(TV) NTSC interference-free service area is 38,515 km^2 containing a population of 2,110,000 persons, according to the Commission's Sixth Report and Order. The approximate new interference area with 55,210 people represents only 2.6 percent of the existing WTVD(TV) population.

Also, much of the new DTV interference area is located within the Grade B coverage contours of other stations with the same network affiliation as WTVD(TV).

WRDW-TV Interference Considerations

WRDW-TV on Channel 12 at Augusta, Georgia is short-spaced to the proposed DTV allotment on Channel 11. The required minimum separation distance from each station is less than 17.7 kilometers or greater than 146.4 kilometers. The actual separation distance is 128.2 kilometers. Therefore, the short-spa11cing is 18.2 kilometers from WRDW-TV to the proposed WIS(TV) Channel 11 DTV facility. An interference analysis has been completed to WRDW(TV).

According to our calculations, the amount of new, or unique, interference to WRDW-TV occurs over 200 km^2 which contains approximately 46,643 people. Figure 5 shows the

service contour of the proposed WIS(TV) DTV facility and the Grade B contour of WRDW-TV. The DTV interference areas are shown by the cross-hatching, the existing interference by the dots. A county breakdown of the population and households is shown on Figure 6.

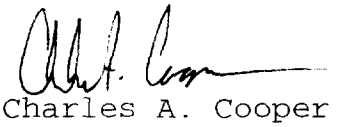
The existing WRDW-TV NTSC interference-free service area is 32,211 km^2 containing a population of 921,000 persons, according to the Commission's Sixth Report and Order. The new interference area with approximately 46,643 people represents only 5.1 percent of the existing WRDW-TV population.

Also shown on Figure 5 is the Grade A coverage contour of station WLTX(TV) at Columbia, South Carolina, which has the same network affliction at WRDW-TV. The WLTX(TV) Grade A contour completely encompasses the predicted new interference area caused by the WIS(TV) DTV facility.

Interference Calculation Methodology

The interference prediction method employed for the herein calculations are based on the Commission's OET Bulletin 69 and the software provided by the Commission. The terrain elevations and the associated Longley-Rice field strength values are calculated at one-kilometer intervals for both the desired and undesired stations with an assumed receiver antenna elevated 10 meters above ground level.[2] The appropriate desired-to-undesired interference ratios were employed with consideration to the off-axis

receiving antenna discrimination, where pertinent. An analog receiver antenna radiation pattern with azimuthal discrimination calculated as the fourth power to the cosine of the angle between the desired and undesired stations with an appropriate front-to-back ratios was employed. The Commission's recommendations of the appropriate input parameters of the Longely-Rice propagation model were also used.

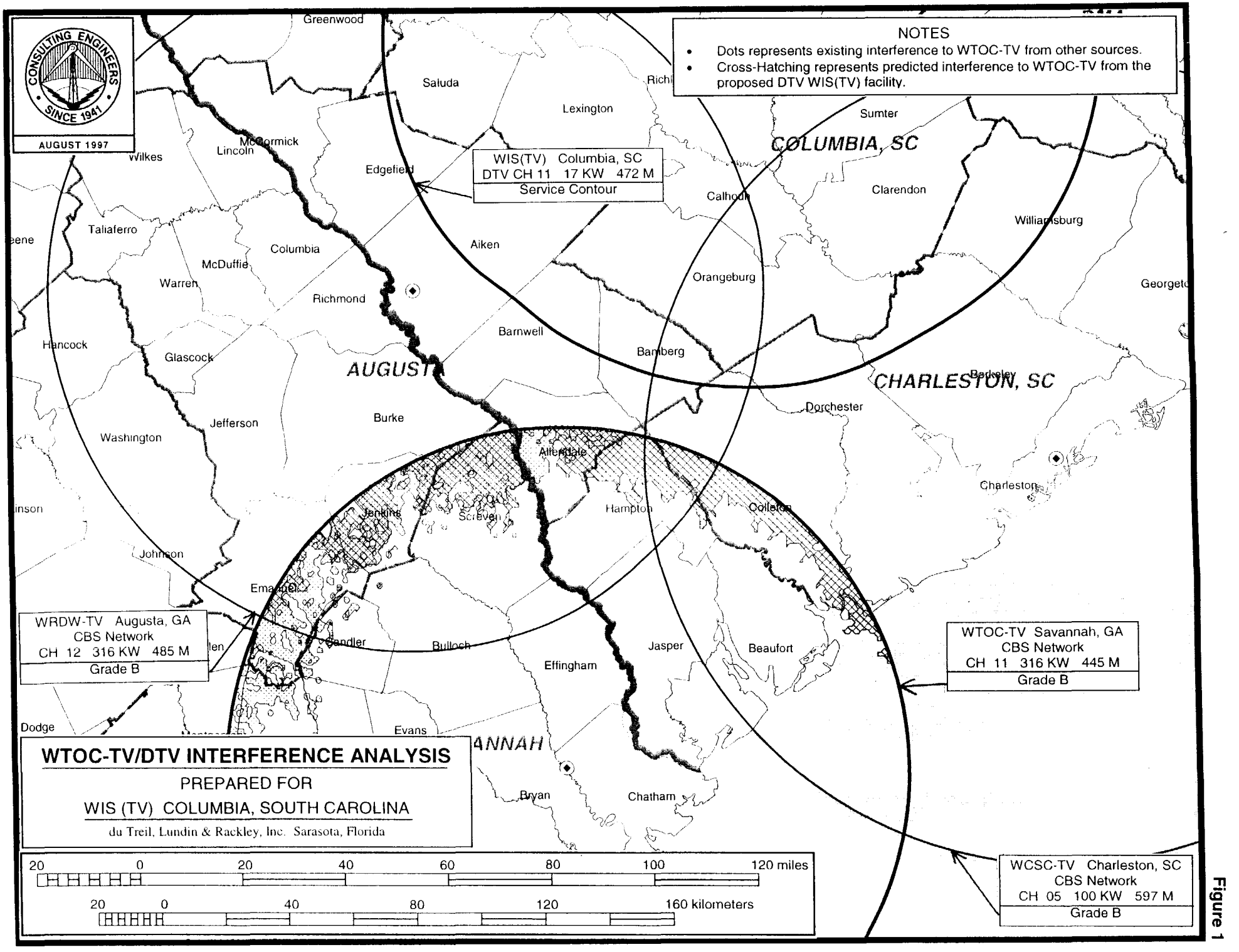


Charles A. Cooper

August 20, 1997

du Treil, Lundin & Rackley, Inc.
240 North Washington Blvd., Suite 700
Sarasota, Florida 34236
941.366.2611

[2] The ground elevations were derived from the three-second terrain database.



WTOC-TV/DTV INTERFERENCE ANALYSIS

PREPARED FOR

WIS (TV) COLUMBIA, SOUTH CAROLINA

du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 1

TECHNICAL EXHIBIT
DTV CHANNEL SUBSTITUTION
WIS(TV) COLUMBIA, SOUTH CAROLINA

Tabulation of New Interference to WTOC-TV from Proposed DTV Facility

	Total County		New Interference[1]	
County	Population	Households	Population	Households
Allendale, SC	11,722	3,784	6,263	2,022
Charleston, SC	295,039	106,858	9	3
Colleton, SC	34,377	12,139	4,581	1,618
Hampton, SC	18,191	6,483	5,461	1,946
Emanuel, GA	20,546	7,405	36	13
Jenkins, GA	8,247	3,034	198	73
Screven, GA	13,842	5,041	316	115

[1] Calculations are approximate.

Figure 2

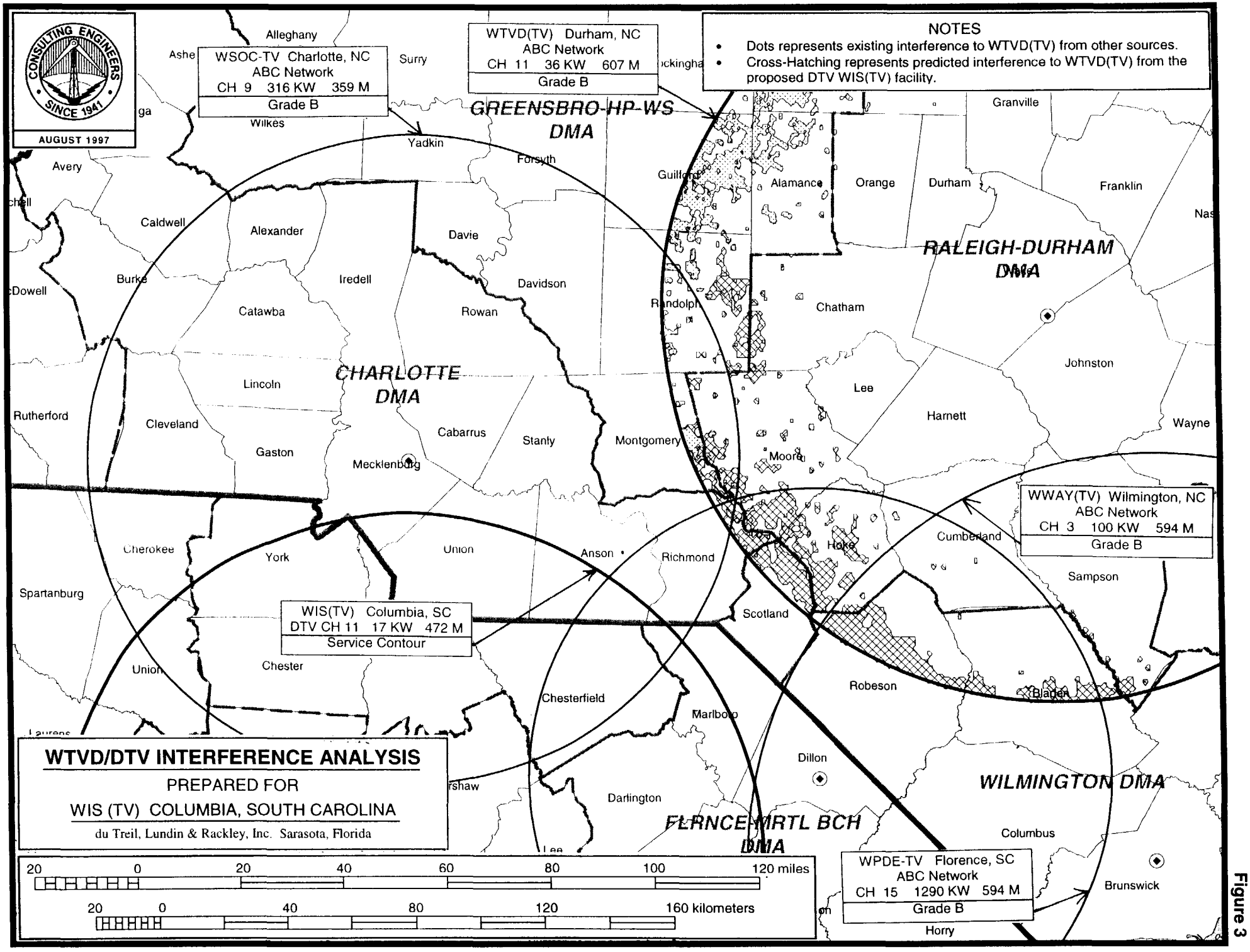

CONSULTING ENGINEERS
SINCE 1941
AUGUST 1997
WSOC-TV Charlotte, NC
ABC Network
CH 9 316 KW 359 M
Grade B
WTVD(TV) Durham, NC
ABC Network
CH 11 36 KW 607 M
Grade B
NOTES
Dots represents existing interference to WTVD(TV) from other sources.
Cross-Hatching represents predicted interference to WTVD(TV) from the proposed DTV WIS(TV) facility.
GREENSBRO-HP-WS DMA
RALEIGH-DURHAM DMA
CHARLOTTE DMA
FLRNCE-MRTL BCH DMA
WILMINGTON DMA
WWAY(TV) Wilmington, NC
ABC Network
CH 3 100 KW 594 M
Grade B
WIS(TV) Columbia, SC
DTV CH 11 17 KW 472 M
Service Contour
WPDE-TV Florence, SC
ABC Network
CH 15 1290 KW 594 M
Grade B
Alleghany
Ashe
Surry
Wilkes
Yadkin
Forsyth
Guilford
Granville
Alamance
Orange
Durham
Franklin
Avery
Caldwell
Alexander
Davie
Burke
Iredell
Davidson
Randolph
Chatham
Catawba
Rowan
Johnston
Lincoln
Lee
Rutherford
Cleveland
Cabarrus
Stanly
Montgomery
Harnett
Wayne
Gaston
Mecklenburg
Moore
Cherokee
York
Union
Anson
Richmond
Hoke
Cumberland
Sampson
Spartanburg
Scotland
Chester
Robeson
Chesterfield
Marlboro
Dillon
Darlington
Columbus
Brunswick
Horry
20 0 20 40 60 80 100 120 miles
20 0 40 80 120 160 kilometers
WTVD/DTV INTERFERENCE ANALYSIS
PREPARED FOR
WIS (TV) COLUMBIA, SOUTH CAROLINA
du Treil, Lundin & Rackley, Inc. Sarasota, Florida

Figure 3

TECHNICAL EXHIBIT
DTV CHANNEL SUBSTITUTION
WIS(TV) COLUMBIA, SOUTH CAROLINA

Tabulation of New Interference to WTVD(TV) from Proposed DTV Facility

	Total County		New Interference[1]	
County	Population	Households	Population	Households
Alamance, NC	108,213	42,798	57	23
Bladen, NC	28,663	10,807	3,539	1,334
Chatham, NC	38,759	15,337	889	352
Cumberland, NC	274,566	91,823	528	177
Guilford, NC	347,420	137,627	3,154	1,249
Hoke, NC	22,856	7,359	6,400	2,061
Montgomery, NC	23,346	8,365	1,728	619
Moore, NC	59,013	23,684	12,178	4,887
Randolph, NC	106,546	41,107	6,062	2,339
Richmond, NC	44,518	16,846	727	275
Robeson, NC	105,179	36,152	17,359	5,967
Sampson, NC	47,297	17,630	268	100
Scotland, NC	33,754	11,739	2,321	807

[1] Calculations are approximate.

Figure 4

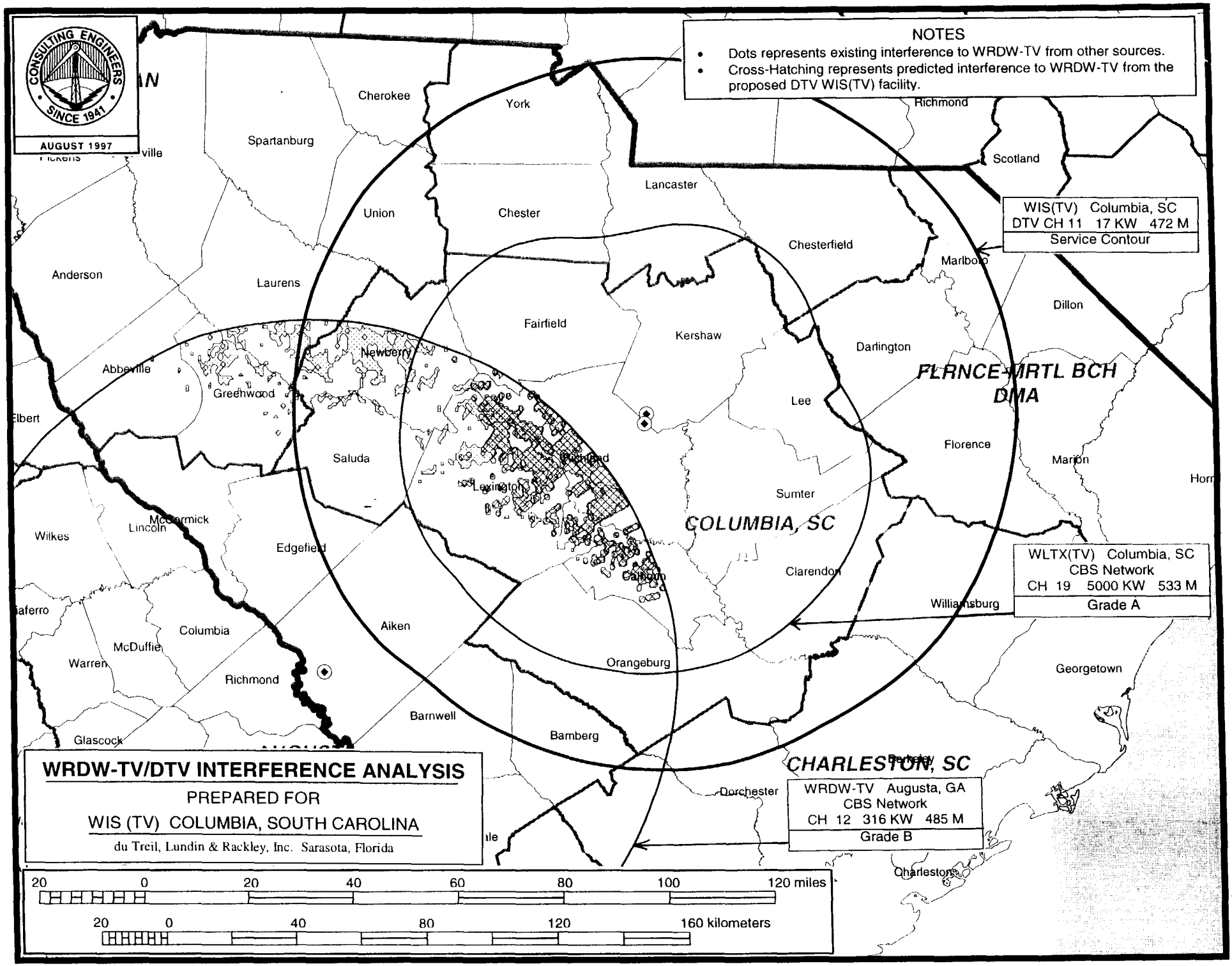

CONSULTING ENGINEERS SINCE 1941
AUGUST 1997
NOTES
• Dots represents existing interference to WRDW-TV from other sources.
• Cross-Hatching represents predicted interference to WRDW-TV from the proposed DTV WIS(TV) facility.
WIS(TV) Columbia, SC
DTV CH 11 17 KW 472 M
Service Contour
WLTX(TV) Columbia, SC
CBS Network
CH 19 5000 KW 533 M
Grade A
WRDW-TV Augusta, GA
CBS Network
CH 12 316 KW 485 M
Grade B
FLRNCE-MRTL BCH DMA
COLUMBIA, SC
CHARLESTON, SC
Cherokee
York
Richmond
Spartanburg
Scotland
Lancaster
Union
Chester
Chesterfield
Marlboro
Anderson
Laurens
Fairfield
Kershaw
Dillon
Darlington
Abbeville
Newberry
Greenwood
Lee
Florence
Marion
Saluda
Lexington
Sumter
Edgefield
Clarendon
Williamsburg
Wilkes
Lincoln
Aiken
Columbia
McDuffie
Warren
Richmond
Orangeburg
Georgetown
Barnwell
Bamberg
Glascock
Berkeley
Dorchester
Charleston
WRDW-TV/DTV INTERFERENCE ANALYSIS
PREPARED FOR
WIS (TV) COLUMBIA, SOUTH CAROLINA
du Treil, Lundin & Rackley, Inc. Sarasota, Florida
20 0 20 40 60 80 100 120 miles
20 0 40 80 120 160 kilometers

Figure 5

TECHNICAL EXHIBIT
DTV CHANNEL SUBSTITUTION
WIS(TV) COLUMBIA, SOUTH CAROLINA

Tabulation of New Interference to WRDW-TV from Proposed DTV Facility

	Total County		New Interference[1]	
County	Population	Households	Population	Households
Calhoun, SC	12,753	4,501	3,660	1,292
Lexington, SC	167,611	61,864	11,829	4,366
Newberry, SC	33,172	12,363	133	50
Richland, SC	285,720	101,543	31,021	11,025

[1] Calculations are approximate.

Figure 6

WIS
THE SPIRIT OF CAROLINA

TO: Steve Smith

FROM: John Cottingham

DATE: August 21, 1997

SUBJECT: WIS DTV CHANNEL 11 INTERFERENCE STUDY

The following is an overview of current Nielsen television viewing data gathered to study the potential impact on neighboring stations of WIS broadcasting on DTV Channel 11.

With regard to the Savannah Market: Potential interference in five counties to the NTSC signal of WTOC would only effect 2.6% of the 65,580 homes in those counties at any one time; furthermore, cable penetration in those counties averages 73%.

With regard to the Augusta Market: Potential interference in the counties of Lexington and Richmond (both of which are in the Columbia Metro) to the NTSC signal of WRDW is only 0.2% of 180,680 homes in those counties at any one time. Those counties have 62% cable penetration.

With regard to the Raleigh-Durham Market: Potential interference in nine counties to the NTSC signal of WTVD would only effect 2.3% of the 184,670 homes in those counties at any one time. Those counties have 50% cable penetration. Of the three counties within the Raleigh DMA, 5.6% of homes might experience interference at any one time.

Summary: As a result of this research we believe that the granting of permission to WIS to broadcast a DTV signal on channel 11 would have minimal impact on viewers within our projected signal pattern and should be allowed by the FCC.

WIS TELEVISION · 1111 BULL STREET · COLUMBIA SC 29201
803-799-1010 · FAX: 803-758-1155

WIS
THE SPIRIT OF CAROLINA

MEMORANDUM

TO: John Cottingham

FROM: Renee Carter

DATE: August 21, 1997

RE: DTV interference areas

Per the Nielsen County Coverage Study 1997, the viewing levels and cable penetration for counties indicated as important in the DTV issue are:

County	Total Households	Sun-Sat 7a-1a AQH Share of viewing to other station	Actual Households Affected	Cable Penetration
WTOC (Savannah)				
Allendale	3,620	3	53	43%
Beaufort	36,840	12	469	95%
Jasper	5,770	39	920	45%
Hampton	6,670	11	243	44%
Colleton	12,700	----	-----	44%
TOTAL	65,600	2.6	1,685	73%
WRDW (Augusta)				
Lexington	72,760	1	299	53%
Richland	107,920	----	-----	68%
TOTAL	180,680	0.2	299	62%
WTVD (Durham)				
Moore*	26,070	19	1,688	55%
Hoke*	9,630	12	401	42%
Robeson	39,030	6	737	46%
Scotland	12,370	10	461	57%
Richmond	17,130	----	-----	79%
Macon	10,730	----	-----	60%
Montgomery	8,060	2	54	38%
Randolph	44,490	1	81	48%
Chatham*	17,160	17	697	28%
TOTAL	184,670		4,319	50%
Durham DMA Subtotal	52,860	5.8	2,986	44%

WIS
THE SPIRIT OF CAROLINA

TO: Scott Patrick CAC

FAX

Date	8-21-97
Number of pages including cover sheet	3

Scott Patrick

TO:	Charles Cooper
	du Treil, Lundin & Rackley, Inc.
Phone	
Fax	941-366-5533

FROM:	John Cottingham
Phone	803-758-1250
Fax	803-758-1155

REMARKS: ☐ Urgent ☐ For your review ☐ Reply ASAP ☐ Please Comment

WIS TELEVISION [illegible] BULL STREET COLUMBIA SC [illegible]
803 [illegible] FAX 803 [illegible]

WIS
THE SPIRIT OF CAROLINA

M E M O R A N D U M

DATE: August 19, 1997

TO: Steve Smith

FROM: John Augustine

RE: DTV Interference Analysis

The following is information from Renee Carter on viewership in counties in which WIS DTV channel 11 would cause interference to WRDW, WTOC and WTVD. WRDW is very low as expected. Allendale, Hampton and Colleton counties are the only ones that show interference to WTOC from Charles Cooper's maps. Allendale and Hampton may have masking (existing interference?) if I understood Charles correctly. If so then Colleton county is the only one that counts, good numbers. The WTVD information is pending. Some of the interference to them is in their ADI so the numbers are expected to be high. This requires some action on our part to reduce the interference.

County	Households	Share	Cable Penetration
WTOC (Savannah)			
Allendale	53	3	43%
Beaufort	469	12	95%
Jasper	920	39	45%
Hampton	243	11	44%
Colleton	----	—	44%
WRDW (Augusta)			
Lexington	299	1	68%
Richland	----	—	53%
WTVD (Durham)			
Moore	1,688	19	55%
Hoke	401	12	42%
Robeson	737	6	46%
Scotland	461	10	57%
Richmond	----	—	79%
Macon	----	—	60%
Montgomery	54	2	38%

*Our county coverage books includes only SC counties - these are all in NC. I have a call in to Nielsen in an attempt to get this information; however, our rep is in Nashville and (obviously) does not have this information with her - we are trying to get in touch with someone else in that office to pull it for us, but it may not be today

To compile a list of all cable systems carrying each of these stations in each of these counties is potentially a week-long project and may not be accurate even when completed to the best of our information. I included the percentage cable penetration per county; the household numbers/shares are Average Quarter Hour, include cable and non-cable households, and are current with the 1997 Nielsen county coverage information just received.